

**STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL**

**NPDES PERMIT No. EFSEC 2002-01
RESPONSE TO COMMENTS**

**Bp Cherry Point Cogeneration Project
BP West Coast Products LLC
4519 Grandview Road
Blaine, Washington 98230**

September 24, 2004

In November 2003, the Energy Facility Site Evaluation Council (EFSEC or Council) issued for public comment a draft State Waste Discharge (SWD) Permit for the proposed BP Cherry Point Cogeneration Project. A public hearing was held on December 9, 2003 in Blaine, Washington, and written comments were received through December 12, 2003.

In preparing the response to comments received, EFSEC and the Ecology permit writer determined that the storm water discharges from the BP Cherry Point Cogeneration Project should be regulated by EFSEC through a National Pollution Discharge Elimination System (NPDES) Permit, rather than a state permit. A draft NPDES Permit for the stormwater discharges was therefore prepared and issued for public comment. A public hearing on the draft NPDES permit was also held.

This document responds to the comments received on the draft NPDES permit. A separate response to comments has been developed for the state permit regulating process waste water discharges from the BP Cherry point Cogeneration Project; however, the responses to stormwater related comments to the draft State Waste Discharge Permit¹ are included in this document as Attachment 1, for the reader's reference.

EFSEC received the eight comment letters and oral comment from three individuals: A full copy of the comments is on file at EFSEC and is available upon request.

EFSEC, with the assistance of its contractor, the department of Ecology, has reviewed the comments, and has determined whether changes were needed to the draft NPDES permit. The responses to comments, and recommended permit changes, if any, are discussed below.

Note: Some comments have been summarized.

¹ When put into final form the "State Waste Discharge" permit was also renamed to "Wastewater Disposal" permit to better reflect the fact that it is not a state permit issued by Department of Ecology, but a permit issued by EFSEC under its authority pursuant to Chapter 80.50. RCW.

Letter 1: Curt Leigh, Washington Department of Fish and Wildlife

Comment 1: Condition S6. C – Duty to Mitigate

Mr. Leigh requests that the following language be added to the cited condition, to clarify that responsibility of restoring damages may be required if permit conditions are violated, consistent with the policies and premises set forth in RCW 80.50.010 and in revised WAC 463-14-020(1):

“The permittee also accepts the responsibility to restore and/or compensate for damages to publicly owned natural resources that may result from unauthorized discharge or disposal.”

Response 1:

The proposed addition is not warranted. At the time of application, the “revised” version of WAC 463-14-020(1) was not applicable to the BP Cherry Point Project. The policies outlined in RCW 80.50.010 provide for protection of the quality of the environment, while providing abundant energy at reasonable cost.

EFSEC can require restoration and compensation, as may be applicable, under EFSEC’s enforcement authority under RCW 80.50.150, EFSEC’s authority under the Washington State Clean Water Act Chapter 90.48 RCW, and EFSEC Compliance Determination and Enforcement Procedures Chapter 463-54 WAC.

Comment 2:

Condition S9. F. Implementation: Mr. Leigh requests that the status of the oil/water separator be confirmed during the dry season inspection to assure that it will be able to function at peak efficiency during the first rainfall event of the season. The combination of more elevated risk (due to the presence of oil and grease that has accumulated during the summer months), and additional risk to fish resources in Terrell Creek (the first rain accompanies the beginning of salmon spawning season), justify this addition.

Response 2:

Condition S6. Operation and maintenance, A. Treatment System Operating Plans (TSOP), requires the permittee to submit an operating plan that meets the requirements of WAC 173-240-150, Operation and Maintenance Manual. WAC 173-240-150 (2) (j) requires the permittee to submit a maintenance schedule which includes preventative maintenance. Therefore, the confirmation of the status of the oil/water separator during the dry season inspection is an implicit requirement. It is expected that dry season inspections and resulting maintenance activities will be addressed in the TSOP, thereby implementing Mr. Leigh’s comment and request.

In addition to the duty to inspect, maintain and operate the stormwater treatment system in accordance with the TSOP, the permittee must ensure that discharges comply with the Discharge Limitations of the NPDES permit at all times.

Comment Letter 2: Karen Zeeby

Comment1:

Ms. Zeeby requests that the project not be approved; Washington residents in the project vicinity are already subjected to coal being transported to the project vicinity by air currents and odor problems from existing facilities.

Response 1:

Thank you for your comment.

Comment Letter 3: Mike Torpey, BP West Coast Products

Comment 1:

Special Condition S1.B. - At page 7, the permit specifies oil and grease limits for discharges from the oil/water separators. We think it would be more appropriate to impose these limits at the point where stormwater is actually discharged to regulated waters, as is done with the TSS and toxic limits are set forth in Special Condition S1.C.

Response 1:

The permit has been changed to show that the oil and grease limits apply to the stormwater discharges and not to the discharge from the oil/water separators.

Comment 2:

Special Condition S2. - The draft permit requires monitoring to occur on a weekly or quarterly basis. The Department of Ecology's General Stormwater Permit does not require such frequent monitoring. No justification is provided for departing from the monitoring frequency that generally applies in Washington.

Response 2:

The general permit for stormwater discharges provides coverage for discharges from a broad range of industrial activities. The choice of monitoring frequency for the general permit had to take into account cost for the smaller facilities (mom/pop facilities) within this range. This decision also factored in the number of opportunities available for a facility to sample their discharge to capture the first flush from a defined storm event. These monitoring requirements apply to "uncontrolled" discharges, not those from a detention pond.

The monitoring requirements in the draft permit for the BP cogeneration facility were intended to be more restrictive than the general permit to be protective of the wetlands and other sensitive wildlife in the Terrell Creek watershed and to monitor the stormwater discharge for potential sources of contamination. The frequency of monitoring in the draft permit is comparable to monitoring required at other recently approved combustion turbine facilities (the Tenaska cogeneration facility and the Wallula Power Project).

The frequency of monitoring during construction was reduced from daily to weekly. If the results of monitoring during this permit cycle are favorable, EFSEC could consider reducing monitoring during the next permit term.

Comment 3:

Special Condition S2.B. - The table on page 9 of the permit requires monitoring of "Priority Pollutant Metals" and "EPA Form 3510- 2C." These two monitoring requirements appear to be redundant. To the extent that the priority pollutant metals are already included on the referenced EPA form, we do not understand why they are identified separately. At a minimum, the permit should make clear that a single monitoring sample can be used to address both requirements.

We also wonder whether the reference to EPA Form 3510-2C is correct. EPA Form 3510-2C is a form designed specifically for discharges of industrial process waste waters. We assume that EFSEC intended to reference EPA Form 3510-2F, which addresses storm water discharges associated with industrial activities. The final permit should correct this reference. On the other hand, if EFSEC intended to reference Form 3510-2C, we do not understand the reason for doing so. In the NPDES permitting context, the full range of water quality testing required for industrial process water discharges is generally not applied to stormwater discharges. We do not believe it would be justified for this facility.

Response 3:

The priority pollutant metals list is a small subset of the list of parameters on EPA Form 3510-2C. The two lists were identified separately because the monitoring frequencies for each are different. A sentence has been added to the permit to allow the results from the two stormwater characterization sampling events to satisfy the priority pollutant metals monitoring requirements for the corresponding time periods.

The reference to Form 3510-2C has been changed to Form 3510-2F.

Comment 4:

Special Condition S2.C. - In the last sentence of the last paragraph of this section on page 10, please consider adding the phrase "or a composite of hourly grab samples if the discharge is batch."

Response 4:

The permit has been revised to include the additional wording.

Comment 5:

Special Condition S.5. - BP has two comments regarding this special condition. First, we question the proposal to require submittal of an Engineering Report for the stormwater system. Although engineering reports are often required for industrial wastewater treatment systems, engineering reports are not typically required in stormwater permits. As long as the stormwater

facilities are designed according to the guidelines included in the Stormwater Manual for Western Washington, then the design should be presumed adequate. We do not understand the justification for requiring an engineering report for the stormwater system.

Second, if an Engineering Report is required, BP requests that submittal be required 90-days prior to construction, rather than 180 days prior to construction. 90 days would provide adequate time for review and approval before construction begins. The 180-day deadline would require BP to incur a significant expense more than six months prior to the start of construction.

Please note that this modification would also require a change in the summary table at page 4.

Response 5:

WAC 173-240 requires that engineering reports for industrial wastewater facilities be submitted to the Council for approval. The definition of “industrial wastewater” includes contaminated stormwater and has been interpreted to mean stormwater associated with industrial activity.

In order to determine if the stormwater detention ponds are sized to meet the design requirements in the “Stormwater Management Manual for Western Washington” (August 2001) and any other local stormwater management design requirements, the design of the stormwater system will need to be examined in detail. Because BP will need approval of the engineering report and plans and specifications before they begin construction, EFSEC has required a longer lead time to ensure that resources are available to review and approve these documents. Special Condition 5. is linked to General Condition 5. which allows the Council to approve a shorter submittal timeframe.

Comment 6:

Special Condition S6.A. - This special condition requires the initial submission of a Treatment System Operating Plan (TSOP), which is a plan describing how the oil/water separators and stormwater system will operate. This condition also requires BP to review the TSOP annually and to submit any substantial changes or updates to the Council. BP objects to the requirement that it review the TSOP annually and confirm this review with EFSEC. Once constructed and put into operation, the operation of the oil/water separators and stormwater system are not expected to change from year to year. Accordingly, the requirement to review the TSOP appears to be without justification. BP should only have to report substantial changes to the Council.

We note that WAC 173-240-150 is cited as the basis for the TSOP requirement (see page 14 of the draft permit). WAC 173-240-150 does not requirement the annual review of operating plans.

Revision of this condition would also require a change to the summary table on page 4 of the permit.

Response 6:

The language in the permit was changed to require BP to update and submit the TSOP for any major modifications to the treatment system. WAC 173-240-150 is the basis for requiring the plan and what should be included in the plan.

Comment 7:

Special Conditions S7.A., S7.B. and S.7.C. - The scope of these requirements is not clear in the permit. Please clarify that the Solid Waste Control Plan, Residual Solids Handling Plan and Leachate requirements concern solid waste, residues and leachate associated with the stormwater system.

Response 7:

The purpose of the Solid Waste Control Plan, Residual Solids Handling Plan and Leachate requirements is to prevent contamination of stormwater as a result of any industrial activities at the Generation Facility as a whole. The requested correction is not warranted.

Comment Letter 4: Steve Irving, North Cascades Audubon Society

Comment 1:

We are particularly concerned with the effects that the stormwater discharges from the plant will have on the wildlife in the area north of the proposed cogen plant and the damage the discharge of stormwater will have on the wildlife that use Terrell Creek. We have reread the testimony given by Dr. Kate Stenberg to EFSEC (exhibit 42.0). Dr. Stenberg was called in as a wildlife expert by Whatcom County to review the plan and point out the harm the plant would do to the wildlife of Whatcom County. Dr. Stenberg first talks about the Birch Bay great blue heron colony which she stated is the 3rd largest colony in the state. She talked about the Canadians listing the coastal subspecies of the great blue heron as "sensitive" and that Canada is moving toward listing the species as "threatened". Dr. Stenberg said that the Birch Bay herons use the area north of the proposed plant as a staging area where the herons congregate at the start of breeding season, and as an important foraging area. The herons also use the wetland areas along Terrell Creek for foraging and have their colony downstream from the proposed plant. The problem the herons have is that the area north of the plant and the creek itself is the place British Petroleum has picked to receive their stormwater discharge from their cogen plant.

Response 1:

Dr. Stenberg's testimony was submitted on behalf of Whatcom County. The applicant has since developed a separate wetland mitigation plan to enhance and protect Great Blue heron habitat to address the county's concerns.²

Comment 2:

Dr. Stenberg told us that the herons are not the only wildlife that would be threatened by this stormwater discharge. On page 14 of her testimony she tells of listed Puget Sound chinook, candidate sea run cutthroat and Puget Sound coho using Terrell Creek. She cites a study that shows the cutthroat trout and the coho using the reaches of Terrell Creek between Kickerville

² Final Compensatory Project Mitigation Plan, BP Cherry Point, June 2, 2004: Appendix F: BP Cherry Point Cogeneration Facility Wetland Mitigation and the Birch Bay Great Blue Heron Colony (June 29, 2004)

and Jackson Roads which is where the stormwater is proposed to go. She also tells of unexplained fish kills in Terrell Creek in the past.

Response 2:

Because Terrell Creek is known to support protected salmonids, both the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service were consulted to determine whether endangered salmonids would be affected by the construction and operation of the project, including discharges of treated stormwater to the wetlands mitigation areas. It was determined that adverse effects were not likely to occur because the following mitigation measures would be implemented: implementation of stormwater pollution prevention plans, prepared in accordance with Ecology's 2001 Stormwater Management Manual for Western Washington; implantation of the wetlands mitigation plan to enhance 110 acres of wetland between the Project and Terrell Creek; and implementation of additional best management practices prohibiting the use of equipment within 300 feet of water bodies.

Comment 3:

We have also read the Fact Sheet provided by the State of Washington Energy Facility Site Evaluation Council. The EFSEC document identifies the creek as being a Class AA receiving water.

The Fact Sheet points out the State of Washington's degradation policy that requires that the discharge into receiving water shall not further degrade the existing quality of the water body.

In the same Fact Sheet (page 12) re; stormwater discharge: it is stated that stormwater discharge is anticipated to contain oil and grease, suspended solids, and possibly copper, iron, nickel, and zinc.

Further, on page 8 of the Fact Sheet, it is stated that the oil/water separators will be designed to produce an average effluent of less than 10 mg/l of oil and grease – some oil and grease will be introduced despite the proposed treatment. It is not possible to say that putting all these things into a class AA creek does not degrade it.

Response 3:

Because this is a new facility, site-specific stormwater characterization information is not yet available. The Department of Ecology's experience with other cogeneration plants is that the stormwater discharges from these facilities have relatively low concentrations of oil and grease, solids, and metals. On the basis of this experience, the Ecology permit writer believes that the stormwater discharge will meet water quality standards in Terrell Creek. These standards are designed to be protective of all biota in the receiving water and watershed.

The NPDES permit includes numeric limits for oil and grease and total suspended solids and a narrative requirement to comply with water quality standards. Source control best management practices (BMPs) and treatment BMPs are also required to limit the contamination of stormwater and prevent water quality violations. The fact sheets for the permit stated that discharges that do not exceed benchmark values are not likely to violate water quality standards.

The NPDES permit includes monitoring to provide tangible evidence of how well the permit requirements control pollutants in stormwater. If analysis shows that the stormwater discharge is violating water quality standards, enforcement action may be taken. There is also a general condition in the NPDES permit that will allow EFSEC to reopen the permit to address any adverse effects from the stormwater discharge.

Comment 5:

Under the heading of spill control plans on page 8 the fact sheet states that the Applicant plans to store a quantity of chemicals that have the potential to cause water pollution if accidentally released. The list of these chemicals are outlined on page 6. It is known that, in spite of best intentions, the applicant periodically has crude oil, diesel, and gasoline spills off their dock into Cherry Point. Sooner or later, spillage of some of these chemicals will end up in the fields north of the proposed plant and into Terrell Creek with devastating effects on wildlife under the proposed stormwater plan.

Response 5:

As indicated in the draft permit, the permittee would be required to develop a number of plans to assure that chemical spills with the potential of polluting the stormwater do not occur, including:

- A Solid Waste Control Plan (Condition S7.A.);
- A Residual Solids Handling Plan (Conditions S7.B);
- A Construction Phase Spill Plan (Condition S8. A);
- An Operations Spill Plan (Condition S8.B);
- A Construction Phase Stormwater Pollution Prevention plan (Condition S9.A);
- An Operations Stormwater Pollution Prevention Plan (conditions S9.B).

These plans include the implementation of Best Management Practices (BMPs) to prevent the spillage of materials and mitigate such spills if they do occur.

Comment 6:

We feel that no stormwater should be allowed to flow north from the plant into the wetland mitigation lands and into Terrell Creek. Dr. Stenberg put it this way: "The mitigation plan implies that the wetland mitigation area will provide water quality treatment for stormwater. It is not appropriate to use a mitigation area for stormwater treatment." We strongly feel that this stormwater must be discharged to the Strait of Georgia via the same outfall used for the plant's process wastewater, or via one of the outfall's used for the existing refinery stormwater. We see no reason why this potentially toxic stormwater must be discharged into the sensitive ecosystem of Terrell Creek.

Response 6:

BP did consider routing stormwater runoff from the cogeneration facility to the refinery's stormwater treatment system. However, concurrently with the review of the mitigation to wetlands impacts, the Army Corps of Engineers and the Department of Ecology's Wetlands

Section preferred that surface water be kept in the Terrell Creek basin rather than discharged through the refinery to the Strait of Georgia. This would allow use of the water for beneficial mitigation measures to restore and enhance existing wetlands and habitat.

The wetland mitigation plan does not intend that the wetlands serve as a stormwater “treatment” system. The limits on the stormwater discharge in the NPDES permit are designed to meet the State’s Water Quality standards for discharges to fresh water. These standards were designed to be protective of all biota in the receiving water and watershed.

Comment Letter 5: Andrew Bickmore, Sto:lo Nation

Comment 1:

Regular water testing is important because it is the primary means by which water quality can be evaluated and monitored over both the short-term and the long-term. Therefore, it is vital that testing occurs frequently enough to gain an accurate picture of the amounts and types of compounds that are discharged into the environment. A test that is performed once a month can not under any circumstances provide an accurate assessment of the quality of the storm water that is being discharged during an entire one month period. An accurate assessment of the quality of storm water is obtained by repeating the same tests over and over again. Repeated testing allows industry and regulators to determine average discharge levels, maximum discharge levels, minimum discharge levels, and the times of both maximum and minimum discharge levels. A single monthly test that demonstrates that storm water discharge is within acceptable parameters simply proves that the storm water discharge is in conformity with storm water discharge standards at the time of the discharge, nothing more.

Response 1:

Although reporting of monitoring results is required on a monthly basis (permit Condition S4.A), the Sampling Frequency for discharges from the stormwater ponds is established as a weekly requirement, at a minimum (permit conditions S2. A and B). More frequent sampling may be required if batch discharge events occur.

Comment 2:

Testing in excess of minimum testing frequencies is probably warranted during the start up and initial production periods because it will take both the operators and the regulators time to learn the characteristics of the storm water treatment system. There might be pieces of equipment that will have to be adjusted by minute increments at regular intervals over a several month period before they begin to operate at or near specification. Frequent testing will help both operators and regulators determine if the minute incremental adjustments are improving the performance of the storm water treatment system.

Response 2: Two types of monitoring requirements have been included in the permit to account for characterization of the operation of the stormwater system. First, twice within the five year cycle of the permit, the permittee is required to conduct a full characterization of the stormwater

discharges (Condition S2.C). Second, the permittee is required to sample for “priority pollutant” metals on a quarterly basis for the first year of operation, and semiannually thereafter.

Comment 3:

The Sto:lo Nation has no doubt that the storm water treatment system will receive regular and proper maintenance like all of the other systems at the Cogeneration Project. Regular maintenance will minimize unexpected downtime and contribute directly to the storm water treatment system operating at or near specification when it is needed most, primarily during large storm events. As well, all equipment should be inspected in excess of the mandatory minimum inspection frequency during the start up and initial production periods to determine if the planned maintenance schedule, especially the removal sludge from the oil-water separators, is adequate for the operating conditions of the storm water treatment system.

Response 3:

Condition S6. Operation and maintenance, A. Treatment System Operating Plans (TSOP), requires the permittee to submit an operating plan that meets the requirements of WAC 173-240-150 , Operation and Maintenance Manual. WAC 173-240-150 (2) (g) requires the permittee to submit a discussion of how the facilities are to be operated during anticipated startups and shutdowns so as to maintain efficient treatment. The treatment system must also be operated consistent with the requirements of Ecology’s 2001 Stormwater Manual for Western Washington.

Comment 4:

Because there will be two oil separators and two detention ponds, in effect two separate storm water treatment systems, it might be worthwhile to investigate the possibility of linking the oil separators together. This would give operating staff the option of choosing which system storm water would be directed towards for treatment if the need ever arose, including the sudden unexpected failure of one storm water treatment system or the occurrence of a severe storm event that overwhelms the ability of one of the storm water treatment systems to treat all of the storm water that is directed towards it.

Response 4:

The two stormwater systems are designed to collect stormwater from separate areas. Once the Project is in operation, one system will remain in operation to serve the generation facility, while the other will be transferred to the BP Refinery, to serve the Refinery’s laydown areas. Because the two stormwater ponds would be under the jurisdiction of separate state agencies (EFSEC for the stormwater pond associated with the Cogeneration Facility, and Ecology for the pond associated with the Refinery laydown areas), the oil separators must be operated as separate units, for monitoring compliance purposes.

Both systems must be sized to meet the design requirements in the “Stormwater Management Manual for Western Washington” (August 2001) and any other local stormwater management design requirements. These requirements specify that stormwater ponds should be designed to treat rainfall from a 6-month, 24-hour storm, at a minimum. BP presented information about the

design basis for the stormwater ponds in Appendix F (Attachment A) of their Application for Site Certification. The design of the stormwater system will be examined in detail when the engineering report and plans and specifications are submitted to EFSEC for review and approval per Condition G5 of the NPDES Permit.

Comment Letter 6: Eliana Friedlob

Comment 1:

To assure that the intended outcome of this project to restore salmon to Terrell Creek, is not jeopardized by degradation of water quality associated with stormwater discharges from the cogen plant, in this regard, I recommend that in addition to testing water quality in the retention ponds, that the applicant undertake routine water quality testing consistent with best available practice adjacent to the retention pond drainage field. Results from these water quality monitoring activities should be made readily available by the applicant to the general public and relevant agencies such as the Departments of Ecology and Natural Resources upon request.

Response 1:

The monitoring of discharges from the stormwater treatment system will be performed at the discharge of the oil/water separator, not in the ponds as indicated by the commentor. The samples will therefore reflect the quality of the water which is actually being discharged to the wetlands mitigation areas. The permit requires that monitoring results be reported to EFSEC and Ecology on a monthly basis. Once submitted to the regulatory agency, these reports are public records, and the public may obtain copies of the documents under the provisions of the Washington State Public Records Act.

Comment Letter 7: Cathy Cleveland

Comment 1:

The Permit will allow 15 mg/l of oils to slip through the stormwater system and drain into Terrell Creek. This is unacceptable. Toxicity tests done on Whatcom Creek after the pipeline rupture showed much lower levels of gasoline and other hydrocarbons to be “safe” for salmon to return in the fall. These amounts, for survival of salmon eggs, fry, and juveniles, are mg/liter less than the amounts the permit allows.

Studies conducted following the Exxon Valdez oil spill concluded that pink salmon eggs are sensitive to low concentrations of polynuclear aromatic hydrocarbons (PAHs) that characterize weathered oil. Western Washington University’s Institute of Environmental Toxicology and Chemistry confirms that sunlight changes the chemical bonds of hydrocarbons and makes them more toxic than they originally were. Salmon embryos exposed to PAH concentrations of 1.0 ppb demonstrated a twofold increase in mortality compared with unexpected embryos.

The National Marine Fisheries Services are tracing a link between contaminants associated with automobile oil and damage to the immune system of salmon. Studies in the Columbia River have shown that when hydrocarbon contaminants reach 1,000 ppb, no arthropods are found (a food supply for salmon) – a much lower ratio than 15 mg/liter.

Response 1:

The information that the commenter is referring to involves studies of oil or hydrocarbon product spills or releases and their effects on marine and fresh water biota. The oil/water separator proposed as part of the cogeneration facility's stormwater treatment system is required to be designed to remove oil and other water-insoluble hydrocarbon products and settleable solids from stormwater runoff. The oil and grease being measured in the treated stormwater discharge is in the dissolved form rather than actual weathered oil or hydrocarbon product.

The oil and grease limit of 15 mg/l is a technology-based limit as discussed in the response to Comment #8. However, this concentration is also used as a benchmark value in the state and federal industrial general stormwater permits. The fact sheets for these permits state that discharges that do not exceed benchmark values are not likely to violate water quality standards.

The NPDES Permit for the BP cogeneration facility also includes a limit on toxics in the stormwater effluent that will restrict the discharge of PAHs.

Comment 2:

As part of the Endangered Species Act, the National Marine Fisheries Service (NMFS) has determined that the Chum, Chinook, and Steelhead salmon are at risk of extinction primarily due to human activities. The NMFS lists several categories of actions that are most likely to harm endangered salmon. Category B is the most relevant to Terrell Creek: Discharging pollutants, such as oil, toxic chemicals, radioactivity, carcinogens... into a listed species habitat. NMFS states that those who believe their activities are likely to injure or kill salmon are encouraged to immediately change that activity. This means to not divert stormwater into Terrell Creek because there is a potential to injure or kill salmon eggs, salmon fry, and juvenile salmon.

The Maritime Heritage Fish Hatchery in Bellingham has studied the recurrent mortality of coho salmon. Hatchery water is supplied by Whatcom Creek. Mortality typically coincides with first-flush storm events, which suggests that toxic pollutants in the stormwater runoff to Whatcom Creek may be responsible.

We respectfully request that BP voluntarily stipulate to modify their plans for stormwater disposal and treatment. We ask that all stormwater and surface water go through the refinery wastewater treatment system and none of it go into Terrell Creek directly or indirectly. If BP will not voluntarily agree to be in compliance with the Endangered Species Act, we respectfully request that all stormwater and surface water on refinery/cogeneration property be required to go into the refinery wastewater treatment system.

Response 2:

BP did consider routing stormwater runoff from the cogeneration facility to the refinery's stormwater treatment system. However, concurrently with the review of the mitigation to wetlands impacts, the Army Corps of Engineers and the Department of Ecology's Wetlands Section preferred that surface water be kept in the Terrell Creek basin rather than discharged through the refinery to the Strait of Georgia. This would allow use of the water for beneficial mitigation measures to restore and enhance existing wetlands and habitat.

The limits on the stormwater discharge in the NPDES permit are designed to meet the State's Water Quality standards for discharges to fresh water. These standards were designed to be protective of all biota in the receiving water and watershed.

Finally, both the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, concurred that the Project would not have adverse effects on endangered fish species.

Comment Letter 8: Misha Vakoc, U.S. EPA Region 10.

EPA Region 10 had no comments regarding this permit.

Public Comment Meeting, August 5, 2004, Blaine, WA

Eliana Steel Friedlob

Comment 1:

It would be helpful to have some baseline information about water quality in the Terrell Creek Watershed prior to implementation of the co-gen plant.

Response 1:

As indicated in the Fact Sheet accompanying the draft NPDES permit, Terrell Creek has been classified as a Class AA waterbody, the highest classification possible pursuant to chapter 173-200 WAC. Conditions for discharges to Class AA waterbodies are already the most stringent possible. Although additional information about the water quality in Terrell Creek may be beneficial to management of the water body, it is not necessary to determine which level of effluent limitation is required on the stormwater discharges to protect Terrell Creek.

Comment 2:

There needs to be a clearer link between the design of the stormwater system and its functionality, and how the monitoring will be performed. Consideration should be given to storm and flood events.

Response 2:

The permittee is required to submit a detailed report regarding the stormwater system, and oil/water separators for review and approval by EFSEC, prior to beginning construction of the system. (see Condition S5. Engineering Report). The stormwater system must be designed and constructed in accordance with Ecology guidelines. These guidelines also set out the requirement to size the ponds for rainfall from a 6-month, 24-hour storm, at a minimum. The ponds will discharge the stormwater into the wetlands. The discharge system will also be designed to recreate natural hydrologic flow conditions on the wetlands.

Prior to construction of the pond, the permittee must also submit a treatment system operating plan (see condition S6.A.). By requiring review and approval of both of the above reports prior to construction of the ponds, EFSEC can be assured that the operation of the ponds will coordinate with their design, and vice versa.

Comment 3:

It would be useful to have baseline information about the diffusion of heavy metals or other elements in the wetlands.

Response 3:

For purposes of NPDES permitting, it is considered that the water being discharged from the stormwater system into the wetlands must meet all state water criteria, regardless of any beneficial effect that the wetlands may have in cleaning the water before it discharges to Terrell Creek.

However, in the Final Compensatory Mitigation plan, prepared by the Applicant for the Corps of engineers, the Applicant has analyzed the potential for the wetlands removing sediments, nutrients, heavy metals and toxic organics before and after the wetlands mitigation plan is implemented. It was determined that no change would occur in the control of sediments or nutrients, but that there might be a decrease in the wetlands' ability to remove metals and toxic organics because of the decrease in herbaceous cover as a result of having more seasonally inundated acreage to create beneficial wildlife habitat.

Cathy Cleveland

Comment 4:

The statement "that there will be no detectable amount of organic priority pollutants listed under 40 CFR, Part 423, Appendix A, in the discharge" has not been included in the NPDES Permit

Response 4:

The requirement for "no detectable amount of organic priority pollutants in the discharge" is from the Pretreatment Standards for New Sources in the Steam Electric Power Generating Point Source Category, 40 CFR 423.17. These are technology-based pre-treatment standards that

apply to waste streams from a cogeneration facility that are discharged to a publicly owned treatment works (POTW) or another facility for treatment. These pretreatment standards do not apply to stormwater discharges. The SWD Permit has been revised to clarify that these requirements apply to pollutants in the cooling tower blowdown.

Comment 5:

The requirements that appropriate flow measurement devices and methods consistent with acceptable scientific practices be selected, installed, calibrated and maintained has not been included in this permit.

Response 5:

The requirement for flow measurement devices was intended for monitoring of the process waste water discharges from the cogeneration facility, not the stormwater discharges. Flow measurement is not necessary in this situation, as the pond discharge will be designed for optimum discharge to the wetland mitigation area.

Comment 6:

Is condition S-3 – Nonroutine Unanticipated Discharges” even required? All alternatives for re-use of the water should be exhausted prior to allowing such a discharge.

Response 6:

Condition S. 3 of the NPDES permit specifically requires that the permittee consider and describe “Any alternatives to the discharge, such as reuse, storage, or recycling of the water” in its request for the authorization. The condition is required in the permit, to establish a process by which unanticipated discharges can be evaluated and authorized on a case-by-case basis.

Comment 7:

Why does the Council make the determination whether or not the bypass has the potential to cause violations of the permit? Is the council authorized by BP to monitor the discharges?

Response 7:

Should the Project be approved by the Governor, the Council is the sole state agency authorized to monitor compliance of the Project, and enforce against any violations that may occur. The council has received this authority through its Laws, Chapter 80.50.RCW. It is the Council’s statutory duty to evaluate if any action it authorizes has the potential to cause significant adverse environmental impacts.

Comment 8:

Why was the EPA form 3510-C, Pollutant Analysis Gathering Requirements omitted?

Response 8:

Condition S2. C of the NPDES permit does still require that the permittee characterize the stormwater discharges for parameters in EPA's Form 3510-2C. The same condition was presented in the draft State Waste Discharge Permit, and is included in the final Wastewater Disposal Permit.

Comment 9:

Why was section F – Compliance Schedule, omitted from this permit?

Response 9:

The language was included in the draft NPDES permit, at General Condition 23, and will be retained in the final permit.

Comment 10:

Why were conditions regarding discharge of sanitary waste omitted from this permit?

Response 10:

Conditions for discharge of sanitary waste will continue to be covered under the Wastewater Disposal permit.

Comment 11:

The Stormwater ponds are not required to be lined in this permit. It is essential, and lining should be required to prevent leaching into the ground.

Response 11:

Upon further evaluation of the applicable laws and regulations, it was determined that requiring that the storm water ponds be lined was not legally possible. The Implementation Guidance for the State Ground Water Quality Regulations (April 1996, Publication #96-02) states that the Ground Water Quality Standards apply to any activity that has potential to contaminate ground water quality. Stormwater discharges are listed as one of the activities considered to have potential to contaminate. To demonstrate compliance with the Ground Water Quality Standards, the Department of Ecology offers two options – 1) be covered by a permit that contains ground water protection provisions or 2) complete a hydrogeologic study and develop a ground water monitoring plan.

The NPDES Permit and fact sheet therefore do not include a requirement for lined ponds. Best Management Practices and other permit requirements are expected to limit potential contamination of stormwater and to protect groundwater quality during construction and operations.

Comment 12:

Under condition D, why was the requirement to remove solids when six inches had accumulated removed?

Response 12:

The specific depth requirement was removed from the applicable condition in the NPDES permit. Wording was added to reference a specific depth in the engineering report and Treatment System Operating Plans for the stormwater detention ponds. The stormwater ponds will be designed for a specified storm event and will require that a certain volume is maintained to meet that design standard on an on-going basis. The stormwater ponds will be able to retain only so many solids before affecting the design capacity.

Condition S5.1 of the NPDES permit requires that BP submit an engineering report with the details of the design and operation of the stormwater treatment system. As part of the engineering report, BP will be required to determine the maximum level of solids that will be allowed to meet the design standard for the ponds. The Treatment System Operating Plans for the stormwater detention ponds will also include procedures for periodically checking the sediment levels in the ponds and then cleaning the ponds when the maximum level of solids is reached.

Comment 13:

The replacement for S-5, Engineering Report, is vague and too discretionary. Will the report document what happens to the sediment and prevention of spills during the transport from the ponds.

Response 13:

Submittal of the Engineering Report is not discretionary and is clearly a requirement of the permit. The cited reference (Chapter 173-240 WAC) clearly outlines what specific information has to be included in the report. As indicated in the condition, the report will include sediment management in the pond.

Once removed from the pond, the sediment would be managed according to the plan developed Under Condition S7.A, – Solid Waste Control Plan. The permittee will have to have a plan in place before the solids are moved, to assure that they are moved and disposed of in a manner that is protective of the environment.

Comment 14:

The permit does not state that the permittee is responsible for achieving compliance with the federal Clean Water Act, the federal Water Pollution Control Act, and the Endangered Species Act.

Response 14:

With respect to the federal Clean Water Act (also known as the Federal Water Pollution Control Act), the effluent limitations presented in the permit have been chosen so that the Project will indeed be in compliance with the Act. Even if not stated in the permit, the permittee's activities must comply with both the state and federal Clean Water Acts at all times.

With respect to the Endangered Species Act, the applicant, and applicable federal agencies, have complied with the requirements of consultation under the Endangered Species Act (see Comment Letter 8, Response 2). Even if not stated in the permit, the permittee's activities must comply with the Endangered Species act at all times.

Comment 15:

The penalties are inadequate, and should be based on the quantity of pollutant discharged, not per violation.

Response 15:

The penalties indicated in the permit are required by state and federal law. The federal Clean Water Act has established a penalty system, and the NPDES permit must follow that system to be legal.

Comment 16:

Page 10 of the fact sheet states:

The effluent which is ultimately discharged may be different from that reported or anticipated in the ASC. If other constituents or pollutants are introduced or found, or significant changes occur in the effluent from that known or anticipated at this time, the Certificate Holder is required to notify both the Council and the appropriate Department of Ecology staff providing compliance monitoring for the Council. The Certificate Holder may be in violation of the SCA until the NPDES permit is modified to reflect the discharge of such constituents or pollutants.

When or how soon must significant changes in the effluent be reported? Can the permittee continue to pollute after knowledgeable effluent pollutants are discharged?

Response 16:

The requirements for non-compliance notification are included in the permit in Condition S4.E., and require immediate notification of EFSEC and Ecology, and immediate action to control the discharges. The permittee is subject to penalties being levied for each day Project discharges are out of compliance with the permit conditions.

“E. NONCOMPLIANCE NOTIFICATION

In the event the permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the permittee shall:

1. Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the violation, and correct the problem;
2. Repeat sampling and analysis of any violation and submit the results to the Council within 30 days after becoming aware of the violation;
3. Immediately notify the Council and Ecology of the failure to comply; and
4. Submit a detailed written report to the Council within 30 days, unless requested earlier by the Council, describing the nature of the violation, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of the resampling, and any other pertinent information.

Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the terms and conditions of the Site Certification Agreement (SCA) or the resulting liability for failure to comply.”

Comment 17:

The primary reason for protecting water quality in wetlands is through implementary and antidegradation procedures described in part 3 of this WAC 173.201(a)-260(i). In particular, under Subsection J, wetlands that have beneficial use are to be protected, including from stormwater attenuation. Stormwater attenuation means less water, not more water or excess water or unused water. This issue needs to be addressed.

Response 17:

This comment is beyond the scope of the NPDES permitting program.

The commentor is quoting Chapter 173- 201A-260, and more specifically subsection (3) which lists the procedure to be used by the Department of Ecology to apply the appropriate water quality criteria for a water body. The subsection acknowledges that

(i)

(i) In addition to designated uses, wetlands may have existing beneficial uses that are to be protected that include ground water exchange, shoreline stabilization, and storm water attenuation.

and (ii) Water quality in wetlands is maintained and protected by maintaining the hydrologic conditions, hydrophytic vegetation, and substrate characteristics necessary to support existing and designated uses.

The wetlands mitigation plan (Final Compensatory Plan, June 2004) fulfills both of these state mandates. First, implementation of the plan would result in reestablishment of the natural hydrologic flow over the 110 acres of wetlands that are being restored. Second, by reestablishing the hydrologic flow conditions, wetland habitat and wildlife uses therefrom will also be re-

established. The wetlands mitigation plan has been carefully designed to control stormwater discharges and flows into the wetland so that they create as natural conditions as possible.

Comment 18:

The fact sheet (page 12) indicates that ongoing priority pollutant testing will be required. At what frequency?

Response 18:

Permit condition S2. B, Monitoring Schedule – Stormwater Discharges, indicates that priority pollutant testing will occur quarterly the first year, and semi-annually thereafter.

Comment 19:

Why is the Council unable to determine the potential for discharges to cause sediment quantity standard violations? Are there any other cogeneration facilities that could be used to determine impacts to sediment?

Response 19:

Because this is a new facility, site-specific stormwater characterization information is not yet available. The Department of Ecology's experience with other cogeneration plants is that the stormwater discharges from these facilities have relatively low concentrations of oil and grease, solids, and metals. On the basis of this experience, the Ecology permit writer believes that the stormwater discharge will meet water quality standards in Terrell Creek, and will not cause impacts to sediments. These standards are designed to be protective of all biota in the receiving water and watershed.

The NPDES permit includes monitoring to provide tangible evidence of how well the permit requirements control pollutants in stormwater. If analysis shows that the stormwater discharge is violating water quality standards, enforcement action may be taken. There is also a general condition in the NPDES permit that will allow EFSEC to reopen the permit to address any adverse effects from the stormwater discharge.

Comment 20:

Page 13 of the fact sheet indicates that nonroutine and unanticipated Discharges are usually clean waters. Why can't this water be reused for cooling or run through the refinery, or some other efficient use, rather than discharging it into the wetlands?

Response 20:

Condition S. 3, Non routine and Unanticipated Discharges, of the NPDES permit specifically requires that the permittee consider and describe "Any alternatives to the discharge, such as reuse, storage, or recycling of the water." in its request for the authorization. Water would be reused or recycled if possible.

Comment 21:

The map included in the fact sheet is unclear as to how much water is running off into the various ditches. There's ditches numbered all over the map along Grandview Road, and -- and whether or not it is treated or filtered free of oil, grease and toxins. Ditches T-1 and T-4 and 5 clearly do not look like the waters are routed through the oil -- oil-water separator 'cause it clearly shows some ditches going to the oil-water separator but does not show all ditches going to the oil-water separator. And a lot of them are right along Grandview. Looks like it empties into the ditch which eventually drains into Terrell Creek or Terrell Creek wetlands. Portions of it go right into Terrell Creek.

Response 21:

Two detention ponds will be constructed to control surface runoff from the proposed construction areas. Detention Pond 1 will collect runoff from the cogeneration facility and the portion of Lay-Down Area 4 to be restored after construction is complete. This area is labeled the East Restoration Area. Detention Pond 2 will collect runoff from the Lay-Down Areas 1, 2, and 3 including the portion of Lay-Down Area 2 to become the West Restoration Area. Oil/water separators will be installed at the inlet to each pond. The ponds have been designed to meet technical requirements of both Whatcom County and the Washington State Department of Ecology (Ecology) to provide adequate water quality treatment and flow control for runoff from impermeable surfaces to be created by the proposed construction.

Detention Pond 1 will be located in the northwest corner of the cogeneration site. Runoff from Detention Pond 1 will be piped northwest across Grandview Road and Blaine Road and dispersed across a large area within one of the wetland Compensatory Mitigation Areas. Detention Pond 2 will be located just west of Lay-Down Area 2. Runoff from Detention Pond 2 will discharge to an existing drainage way that extends across Grandview Road to an extensive pond and wetland system. Both areas to receive site runoff drain to Terrell Creek near its crossing under Jackson Road.

Thus, runoff from the project site will be directed to its historic drainage areas where it will support and enhance existing wetlands before draining to Terrell Creek. In addition, directing runoff to these wetland areas will improve runoff water quality and prevent increasing flow fluctuation in Terrell Creek above existing levels.

Comment 22:

Is all of the stormwater going to be treated in the oil/water separators? What happens to toxins that are not removed by the oil/water separators?

Response 22:

As indicated in Response 22 above, all of the stormwater will be treated in oil/water separators before being discharged into the ponds, and then discharged into the wetlands mitigation areas. The commentor is correct that oil/water separators are not capable of controlling pollutants other than oils and greases.

Because this is a new facility, site-specific stormwater characterization information is not yet available. The Department of Ecology's experience with other cogeneration plants is that the stormwater discharges from these facilities have relatively low concentrations of oil and grease, solids, and metals. On the basis of this experience, the Ecology permit writer believes that the

stormwater discharge will meet water quality standards in Terrell Creek. These standards are designed to be protective of all biota in the receiving water and watershed. Nevertheless, the permittee is required to characterize the stormwater discharges twice in the first five year cycle of the permit.

Comment 23:

The fact sheet indicates that the NPDES permit would ensure that all applicable state and federal discharge requirements for stormwater are met. What about other discharge requirements?

Response 23:

The project has undergone a thorough multidisciplinary review. All discharges that are regulated have undergone public permit review processes, including air emissions (through the Notice of Construction and Prevention of Significant Deterioration program), process waste water discharges (through a state permit process). Through the SEPA process, the Council has considered all elements of the environment that might be impacted by this project, and has determined that no significant adverse environmental impacts would occur.

Comment 24:

The NPDES permit does not address whether discharges to Terrell creek that could affect salmon eggs and fry can be a violation of the Endangered Species Act. NOAA or the Department of Fisheries or the Department of Game and Wildlife should be involved in monitoring.

Response 24:

It has been determined that the project would not likely result in any impacts on Endangered Species. Please refer to Letter 4, Response 2. Agencies involved in monitoring endangered and threatened species have the jurisdiction to monitor any activities that may lead to adverse impacts to threatened fish or wildlife.

Comment 25:

A citizen group should be given funds or money to monitor the discharge independently.

Response 25:

If the project is approved by the Governor, EFSEC, with the assistance of Department of Ecology would monitor Project activities consistent with applicable laws and regulations. Funding monitoring by citizen groups is beyond the scope of the NPDES permit program.

Comment 26:

If any violations or fines are required, the water should be processed or cleaned up.

Response 26:

Condition S6.C, Duty to Mitigate, requires the permittee to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment. Through its jurisdiction under Chapter 80.50 RCW, EFSEC can require a permittee to conduct mitigation for adverse effects resulting from a permit or Site Certification Agreement violation.

Cliff Freeman

Comment 27:

Mr. Freeman supports the NPDES permit, and requests that the council move forward expeditiously and make a favorable recommendation to the Governor.

Response 27:

Thank you for your comment.

Attachment A:

Responses to stormwater related comments to draft State Waste Discharge Permit

Comment from Eliana Steele-Friedlob and Wendy Steffensen, RE Sources (1):

1. *It is likely that the amount of oil and grease, sediment, and metals entering Terrell Creek will be greater than previously seen. Provide an analysis that shows that the allowed oil and grease, sediment, and metals concentrations will not have an effect on Terrell Creek and other wildlife in the watershed. Provide a monitoring plan for Terrell Creek that tracks changes in sensitive biota, suspended sediment, and sediment metal concentrations. If the stormwater discharge is shown to be detrimental to Terrell Creek and its biota, more effective stormwater treatment should be required and the adverse effects be reversed and mitigated.*

Response #1:

Because this is a new facility, site-specific stormwater characterization information is not yet available. The Department of Ecology's experience with other cogeneration plants is that the stormwater discharges from these facilities have relatively low concentrations of oil and grease, solids, and metals. On the basis of this experience, the Ecology permit writer believes that the stormwater discharge will meet water quality standards in Terrell Creek. These standards are designed to be protective of all biota in the receiving water and watershed.

The NPDES permit includes numeric limits for oil and grease and total suspended solids and a narrative requirement to comply with water quality standards. Source control best management practices (BMPs) and treatment BMPs are also required to limit the contamination of stormwater and prevent water quality violations.

The NPDES permit includes monitoring to provide tangible evidence of how well the permit requirements control pollutants in stormwater. If analysis shows that the stormwater discharge is violating water quality standards, enforcement action may be taken. There is also a general condition in the NPDES permit that will allow EFSEC to reopen the permit to address any adverse effects from the stormwater discharge.

Comments from Wendy Steffensen, RE Sources (2-8):

2. *It is stated that secondary containment for chemicals is large enough for the amount of chemical contained plus an allowance for rainfall. The weather is unpredictable and rainfalls are often deluges. It is recommended that the secondary containers have removable roofs as well. These roofs could be removed during times of loading and unloading, but would provide an extra insurance against chemical leaks, given our unpredictable weather and heavy rainfalls.*

Response #2:

We agree that the weather is unpredictable and that there can be heavy rainfall in the Cherry Point area. However, it is not a reasonable expectation to require BP to enclose their chemical storage tanks. There are various laws that regulate the storage of petroleum products and chemicals from the oil spill prevention rules to the Uniform Fire Code. Generally these laws require secondary containment sized for the volume of the tank and at most the volume of the tank plus an allowance for rainfall.

3. *Although it is stated that semi-annual and annual tests shall be conducted for priority pollutant metals for process water and stormwater, this testing is not included in the Summary Table of Report Submittals.*

Response #3:

This requirement has been added to the Summary Table of Report Submittals in the NPDES permit, and was added to the Wastewater Disposal Permit.

6. *How are the stormwater detention ponds sized? Are they sized adequately for treatment of large volumes of water, as occurs during sustained rainfalls?*

Response #6:

The stormwater detention ponds should be sized to meet the design requirements in the “Stormwater Management Manual for Western Washington” (August 2001) and any other local stormwater management design requirements. These requirements specify that stormwater ponds should be designed to treat rainfall from a 6-month, 24-hour storm, at a minimum. BP presented information about the design basis for the stormwater ponds in Appendix F (Attachment A) of their Application for Site Certification. The design of the stormwater system will be examined in detailed when the engineering report and plans and specifications are submitted to EFSEC for review and approval per Condition G5 of the NPDES Permit.

8. *In addition to the 10 and 15 mg/l limit placed on oil and grease, add a requirement that no sheen can be present on the stormwater before it is discharged to Terrell Creek.*

Response #8:

The 10 and 15 mg/l requirement is a technology-based standard for the design of oil/water separators. The design standard also addresses oil sheen. The “Stormwater Manual for Western Washington” published in August 2001 states that “Oil and water separators should be designed to remove oil and TPH down to 15 mg/l at any time and 10 mg/l on a 24-hr average, and produce a discharge that does not cause an ongoing or recurring visible sheen in the stormwater discharge, or in the receiving water.” (Volume V, Chapter 11).

A “no visible sheen” requirement is difficult to include in permits. Biological sheens are often mistaken for oil sheens and are prevalent when water is retained in a pond. A requirement has been added to the NPDES permit to check for a visible sheen in the stormwater discharge and, if observed, to investigate for a possible oil source, to make sure that the oil/water separator is operating properly, and to take corrective action as necessary.

Comments from Mike Torpey, BP Cogeneration Project, on the Permit (10-28):

10. *In issuing the final State Waste Discharge Permit, EFSEC should clearly indicate that EFSEC and Ecology have determined that a National Pollutant Discharge Elimination System (NPDES) permit is not required for the stormwater discharges from the project site. EFSEC should document Ecology’s reasoning for the public record.*

Response #10:

In checking the reasoning for the type of mechanism used to authorize the discharges from the proposed BP cogeneration facility, EFSEC has determined that a National Pollutant Discharge Elimination System (NPDES) permit should be issued rather than a state permit for the stormwater discharge. A draft NPDES permit and fact sheet were developed and issued for public comment. None of the site-specific conditions of discharge documented in the draft SWD Permit were changed as a result of this determination.

13. *In the Summary Table and Condition S.5, change “starting operations” to “first fire”. First fire is a defined point during the commissioning and performance testing period where natural gas is first introduced and burned in the first turbine.*

Response #13:

The wording in the summary table and Condition S5 of the Wastewater Disposal Permit was changed as follows:

For storm water systems, and the oil/water separators, the NPDES permit (condition S.6) requires a Treatment System Operating Plan (TSOP) for the construction phase and a TSOP for the operations phase. The TSOP for the construction phase shall be submitted to the Council for approval ninety (90) days prior to starting site preparation of the facilities. The TSOP for the operations phase shall be submitted to the Council for approval ninety (90) days prior to completing construction.

For process water systems the Wastewater Disposal permit would require that an Operations and Maintenance Manual be submitted 90 days prior to the first discharge of waste water.

14. *The Summary Table and Condition S8.E state that the stormwater pond shall be constructed prior to site preparation. The stormwater pond will be constructed as one of the first activities of the site preparation effort.*

Response #14:

The intent here is that the stormwater pond is in place prior to any soil removal or disruption that would lead to erosion and a discharge of solids.

15. *Condition S1.A requiring “no detectable amount of organic priority pollutants in the discharges” seems to be inconsistent with the requirement to have “no toxics in toxic amounts” in Section C of this condition for the stormwater discharges. Is this consistent with state and federal water quality standards?*

Response #15:

The requirement for “no detectable amount of organic priority pollutants in the discharge” is from the Pretreatment Standards for New Sources in the Steam Electric Power Generating Point Source Category, 40 CFR 423.17. These are technology-based pre-treatment standards that apply to waste streams from a cogeneration facility that are discharged to a publicly owned treatment works (POTW) or another facility for treatment. The Wastewater Disposal Permit has been revised to clarify that these requirements apply to pollutants in the cooling tower blowdown. The Wastewater Disposal Permit requirement for no discharge of PCBs was also clarified to apply to the process wastewaters to be discharged to the refinery.

When reviewing the federal effluent guidelines for steam electric power generating facilities, it was determined that several other pre-treatment standards apply to waste streams from the BP cogeneration facility that will be discharged to the refinery. These standards include a copper limit on chemical metal cleaning wastes and limits for chromium and zinc in cooling tower blowdown. The pretreatment standards and monitoring to check the discharge for compliance with these standards has been added to the Wastewater Disposal Permit.

“No toxics in toxic amounts” is a narrative requirement in the water quality standards that applies to the stormwater discharge from the BP cogeneration facility. The footnote to this requirement in the NPDES Permit clarifies that Terrell Creek, the receiving water for the stormwater discharge, is the point for determining compliance with this standard.

16. *Condition S1.C. - The stormwater system will manage all uncontaminated rain water. Rain water collected in secondary containment will be routed to the stormwater system, unless it is determined to be contaminated.*

Response #16:

In previous communications, BP has indicated that: 1) stormwater that has the potential to collect process chemicals and lube oils will be routed to the process wastewater system and 2) stormwater that has a very low potential to be contaminated with oil or chemicals

and that can also be checked prior to discharge (such as secondary containment around electrical breakers), will be routed to the stormwater system.

BP needs to have procedures in place to ensure that operators are making uncontaminated rain water determinations appropriately. The details of these procedures will be required to be included in the Operations Stormwater Pollution Prevention Plan, required by the NPDES Permit, which will be reviewed and approved by EFSEC.

17. *Condition S2.C – TSS limits for the stormwater discharge may be more restrictive than a turbidity limit based upon the freshwater water quality standards. However, a 25 mg/l TSS limit may be easier to monitor.*

Response #17:

A TSS limit was included in the NPDES permit because TSS is a good surrogate for turbidity and is easier to monitor.

18. *Please include the following statement in Condition S2.C – “The stormwater system was designed using the Western Washington Hydrology Model Version 2 (WWHM2). By using this model for the stormwater system design, the stormwater system is expected to be capable of meeting the required Stormwater Effluent Limitations. It is presumed that by using this model, that the stormwater system is sufficiently sized to meet discharge specifications.” It is our expectation, as well as the Department of Ecology’s, that by using the WWHM2, the stormwater system would be capable of meeting the required Stormwater Effluent Limitations.*

Response #18:

The stormwater detention ponds should be sized to meet the design requirements in the “Stormwater Management Manual for Western Washington” (August 2001) and any other local stormwater management design requirements. Without having the detailed pre-construction design drawings available, such a determination cannot be made. The design of the stormwater system will be examined in detail when the engineering report and plans and specifications are submitted to EFSEC for review and approval per Condition G5 of the NPDES Permit. This type of statement is generally included in the approval letter sent following review of the engineering report and plans and specifications.

20. *The permit requires much more frequent monitoring of stormwater than is required under Ecology’s general permit for stormwater discharges. While the general permit requires quarterly monitoring, the draft permit for this site requires daily and weekly monitoring. No justification for the increased monitoring is provided. In the past, EFSEC has followed the general permit’s monitoring schedule and should do so in this case.*

Response #20:

The general permit for stormwater discharges provides coverage for discharges from a broad range of industrial activities. The choice of monitoring frequency for the general

permit had to take into account cost for the smaller facilities (mom/pop facilities) within this range. This decision also factored in the number of opportunities available for a facility to sample their discharge to capture the first flush from a defined storm event. These monitoring requirements apply to “uncontrolled” discharges, not those from a detention pond.

The monitoring requirements in the NPDES permit for the BP cogeneration facility were intended to be more restrictive than the general permit to be protective of the wetlands and other sensitive wildlife in the Terrell Creek watershed and to monitor the stormwater discharge for potential sources of contamination. The frequency of monitoring in the NPDES permit is comparable to monitoring required at other recently approved combustion turbine facilities (the Tenaska cogeneration facility and the Wallula Power Project).

The frequency of monitoring during construction was reduced from daily to weekly in the NPDES Permit. If the results of monitoring during this permit cycle are favorable, EFSEC could consider reducing monitoring during the next permit term.

22. *Condition S2.F, Flow Measurement – It is not clear if this requirement refers to process water or stormwater or both. As stated previously, we request that the process water flow parameter be removed. Also, there is no requirement in the permit to measure stormwater flow. Because the stormwater pond will be conservatively designed according to WWHM2 and built according to the design, then it is expected to achieve the required level of control.*

Response #22:

The requirement to measure process wastewater flow was removed from the Wastewater Disposal Permit per Comment #19. Since there is no other requirement to measure flow, this condition was also not included in the NPDES permit.

23. *Condition S5. – This paragraph needs clarification to differentiate between O&M manuals required for the construction phase and O&M manuals required for operations phase. WAC 173-240-150 refers to Industrial Wastewater Facilities, which would cover the cogeneration project process wastewater system. The process wastewater O&M manual should be required before completing construction.*

Response #23:

WAC 173-240-150 applies to both stormwater and process wastewater treatment systems for industrial facilities. As indicated in Response #13 above, the following requirements would apply:

For storm water systems, and the oil/water separators, the NPDES permit (condition S.6) requires a Treatment System Operating Plan (TSOP) for the construction phase and a TSOP for the operations phase. The TSOP for the construction phase shall be submitted to the Council for approval ninety (90) days prior to starting site preparation of the

facilities. The TSOP for the operations phase shall be submitted to the Council for approval ninety (90) days prior to completing construction.

For process water systems the Wastewater Disposal Permit would require that an Operations and Maintenance Manual be submitted 90 days prior to the first discharge of waste water.

24. *Condition S7.A, last paragraph – Change “have” to “follow”. One site specific SPCC plan would be developed by the primary contractor. We would then expect all contractors to follow the site specific plan rather than develop their own individual plans.*

Response #24:

Condition S8.A. of the NPDES permit uses the wording “follow”.

25. *Condition S7.B, 6. – Change “implemented” to “submitted to EFSEC”. The operations SPCCP should be submitted to EFSEC six months prior to beginning commercial operations.*

Response #25:

Condition S8.B.) of the NPDES permit requires that an operations spill control plan shall be submitted six months prior to beginning commercial operation and must be followed throughout the term of the permit.

26. *Condition S8.E – This provision indicates that the stormwater ponds are to be lined. The project does not propose to line the ponds, and there is no requirement under state or federal law that they be lined.*

Response #26:

The Implementation Guidance for the State Ground Water Quality Regulations (April 1996, Publication #96-02) states that the Ground Water Quality Standards apply to any activity that has potential to contaminate ground water quality. Stormwater discharges are listed as one of the activities considered to have potential to contaminate. To demonstrate compliance with the Ground Water Quality Standards, the Department of Ecology offers two options – 1) be covered by a permit that contains ground water protection provisions or 2) complete a hydrogeologic study and develop a ground water monitoring plan.

The NPDES Permit and fact sheet do not include a requirement for lined ponds. BMPs and other permit requirements are expected to limit potential contamination of stormwater and to protect groundwater quality during construction and operations.

27. *Condition S8.E – Delete “when sediment accumulation exceeds an average depth of six inches or”. The ponds will be cleaned periodically, when TSS levels indicate that the*

pond is not capable of retaining solids. We would plan to leave between six and twelve inches in the pond after cleaning to ensure the integrity of the pond system.

Response #27:

The specific depth requirement was removed from the applicable condition in the NPDES permit. Wording was added to reference a specific depth in the engineering report and Treatment System Operating Plans for the stormwater detention ponds. The stormwater ponds will be designed for a specified storm event and will require that a certain volume is maintained to meet that design standard on an on-going basis. The stormwater ponds will be able to retain only so many solids before affecting the design capacity.

The NPDES permit requires that BP submit an engineering report with the details of the design and operation of the stormwater treatment system. As part of the engineering report, BP will be required to determine the maximum level of solids that will be allowed to meet the design standard for the ponds. The Treatment System Operating Plans for the stormwater detention ponds will also include procedures for periodically checking the sediment levels in the ponds and then cleaning the ponds when the maximum level of solids is reached.

28. *Condition G7. – It is not reasonable to require all engineering reports and detailed plans and specifications to be submitted 180 days prior to construction. Some documents, such as those related to the stormwater system for site preparation and construction should be submitted before construction. Documents related to the process wastewater system should be submitted before the cogeneration project wastewater system design is finalized. WAC 173-240-110 states that “All engineering reports and plans and specifications should be submitted by the owner consistent with a compliance schedule issued by the department or at least 30 days before the time approval is desired.”*

Response #28:

NPDES Permit Condition G5 states that “Prior to constructing or modifying any stormwater treatment or control facilities, an engineering report and detailed plans and specifications shall be submitted to the Council for review and approval.” Our reading of this condition is that BP will need to submit engineering reports and plans and specs 180 days prior to construction of the system in question versus prior to plant construction. Because BP will need approval of the engineering report and plans and specifications before they begin construction, EFSEC has required a longer lead time for review and approval of these documents. The permit condition does allow the Council to approve a shorter submittal timeframe.

Comments from Mike Torpey, BP Cogeneration Project, on the Fact Sheet (29-39):

29. *Industrial Process, page 5, list of chemicals – The volumes given are preliminary and all are open to change. Some volumes are incorrect. For example, the anhydrous ammonia tank is 12,000 gallons.*

Ammonia – change “2,000 to 6,000” to “12,000”.

*Lubricating oil – add “6,200 gallon tanks”
Hydrogen – change “square” to “cubic”
Carbon dioxide - change “square” to “cubic”
Corrosion inhibitors – change “550” to “55”*

Add: “Polyquaternary Amine Polymer, 350 gallon tank”.

Response #29:

The list of chemicals in the Fact Sheet for the NPDES permit has been revised to include the stated changes and to indicate that these are estimated quantities.

30. *Industrial Process, page 5, paragraph 3 – Change “process wastewater” to “stormwater”. Rainwater collected in secondary containment will be routed to the stormwater system after it is determined to be uncontaminated.*

Response #30:

This section was changed in the Fact Sheet to the draft NPDES permit to state that rainwater collected in secondary containment will be retained until it is determined that it is uncontaminated. This determination will be made following procedures outlined in the Permittee’s Stormwater Pollution Prevention Plan. See response to Comment #16.

34. *Proposed Stormwater Management, page 8 – Delete the second sentence. The provision indicates that the stormwater ponds are to be lined. The project does not propose to line the ponds and there is no requirement under state or federal law that they be lined. Contaminated stormwater will be routed to the refinery wastewater treatment system. The stormwater pond will receive only uncontaminated rain water.*

Response #34:

The reference to lining the stormwater ponds has not been included in the NPDES Permit. See the response to Comment #26.

36. *Stormwater Discharge, page 10 – Remove references to lined ponds. The stormwater detention ponds will not be lined.*

Response #36:

The references to lined ponds have been deleted. See the response to Comment #26.

Comments from Cathy Cleveland (53-54):

53. *The State Waste Discharge Permit will allow 15 mg/l of oils to slip through the stormwater system and drain into Terrell Creek. This is unacceptable. Toxicity tests done on Whatcom Creek after the pipeline rupture showed much lower levels of gasoline*

and other hydrocarbons to be “safe” for salmon to return in the fall. These amounts, for survival of salmon eggs, fry, and juveniles, are mg/liter less than the amounts the permit allows.

Studies conducted following the Exxon Valdez oil spill concluded that pink salmon eggs are sensitive to low concentrations of polynuclear aromatic hydrocarbons (PAHs) that characterize weathered oil. Western Washington University’s Institute of Environmental Toxicology and Chemistry confirms that sunlight changes the chemical bonds of hydrocarbons and makes them more toxic than they originally were. Salmon embryos exposed to PAH concentrations of 1.0 ppb demonstrated a twofold increase in mortality compared with unexpected embryos.

The National Marine Fisheries Services are tracing a link between contaminants associated with automobile oil and damage to the immune system of salmon. Studies in the Columbia River have shown that when hydrocarbon contaminants reach 1,000 ppb, no arthropods are found (a food supply for salmon) – a much lower ratio than 15 mg/liter.

Response #53:

The information that the commenter is referring to involves studies of oil or hydrocarbon product spills or releases and their affects on marine and fresh water biota. The oil/water separator proposed as part of the cogeneration facility’s stormwater treatment system is required to be designed to remove oil and other water-insoluble hydrocarbon products and settleable solids from stormwater runoff. The oil and grease being measured in the treated stormwater discharge is in the dissolved form rather than actual weathered oil or hydrocarbon product.

The oil and grease limit of 15 mg/l is a technology-based limit as discussed in the response to Comment #8. However, this concentration is also used as a benchmark value in the state and federal industrial general stormwater permits. The fact sheets for these permits state that discharges that do not exceed benchmark values are not likely to violate water quality standards.

The NPDES Permit for the BP cogeneration facility also includes a limit on toxics in the stormwater effluent that will restrict the discharge of PAHs.

54. *As part of the Endangered Species Act, the National Marine Fisheries Service (NMFS) has determined that the Chum, Chinook, and Steelhead salmon are at risk of extinction primarily due to human activities. The NMFS lists several categories of actions that are most likely to harm endangered salmon. Category B is the most relevant to Terrell Creek: Discharging pollutants, such as oil, toxic chemicals, radioactivity, carcinogens... into a listed species habitat. NMFS states that those who believe their activities are likely to injure or kill salmon are encouraged to immediately change that activity. This means to not divert stormwater into Terrell Creek because there is a potential to injure or kill salmon eggs, salmon fry, and juvenile salmon.*

The Maritime Heritage Fish Hatchery in Bellingham has studied the recurrent mortality of coho salmon. Hatchery water is supplied by Whatcom Creek. Mortality typically coincides with first-flush storm events, which suggests that toxic pollutants in the stormwater runoff to Whatcom Creek may be responsible.

We respectfully request that BP voluntarily stipulate to modify their plans for stormwater disposal and treatment. We ask that all stormwater and surface water go through the refinery wastewater treatment system and none of it go into Terrell Creek directly or indirectly. If BP will not voluntarily agree to be in compliance with the Endangered Species Act, we respectfully request that all stormwater and surface water on refinery/cogeneration property be required to go into the refinery wastewater treatment system.

Response #54:

BP did consider routing stormwater runoff from the cogeneration facility to the refinery's stormwater treatment system. However, concurrently with the review of the mitigation to wetlands impacts, the Army Corps of Engineers and the Department of Ecology's Wetlands Section preferred that surface water be kept in the Terrell Creek basin rather than discharged through the refinery to the Strait of Georgia. This would allow use of the water for beneficial mitigation measures to restore and enhance existing wetlands and habitat.

The limits on the stormwater discharge in the NPDES permit are designed to meet the State's Water Quality standards for discharges to fresh water. These standards were designed to be protective of all biota in the receiving water and watershed.